# APPENDIX D – CLIMATE AND AIR QUALITY SUPPORTING DATA

## D.1 Emissions Summary Tables – Transmission Line and Series Compensation Station Construction

| TABLE D-1<br>CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-B AND ROUTE VARIATIONS | | | | |
|---|---|---|---|---|
| **Pollutant** | **Year 1 (tons)** | **Year 2 (tons)** | **Year 3 (tons)** | **Tons Per Mile of Transmission Line** |
| **Fugitive Dust from Earthmoving and Grading Activities** | | | | |
| $PM_{10}$ | 127.30 | 157.3 | 0.00 | 1.390 |
| $PM_{2.5}$ | 12.70 | 15.7 | 0.00 | 0.140 |
| **Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]** | | | | |
| $PM_{10}$ | 2,444.80 | 4,570.1 | 965.30 | 39.020 |
| $PM_{2.5}$ | 246.00 | 459.9 | 97.10 | 3.930 |
| **Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]** | | | | |
| $PM_{10}$ | 2,522.80 | 4,404.4 | 895.60 | 38.250 |
| $PM_{2.5}$ | 253.90 | 443.2 | 90.10 | 3.850 |
| **Nonroad Engine Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 26.80 | 54.7 | 6.60 | 0.430 |
| $NO_x$ | 24.20 | 49.6 | 5.90 | 0.390 |
| $PM_{10}$ | 1.60 | 3.2 | 0.40 | 0.030 |
| $PM_{2.5}$ | 1.60 | 3.2 | 0.40 | 0.030 |
| $SO_2$ | 0.10 | 0.3 | 0.03 | 0.002 |
| VOC | 1.80 | 3.8 | 0.40 | 0.030 |
| **Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 25.70 | 43.8 | 5.10 | 0.370 |
| $NO_x$ | 23.10 | 38.9 | 4.50 | 0.320 |
| $PM_{10}$ | 1.60 | 2.6 | 0.30 | 0.020 |
| $PM_{2.5}$ | 1.60 | 2.6 | 0.30 | 0.020 |
| $SO_2$ | 0.10 | 0.2 | 0.02 | 0.002 |
| VOC | 1.80 | 3.0 | 0.30 | 0.020 |
| **Helicopter Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 0.20 | 2.2 | 0.40 | 0.010 |
| $NO_x$ | 0.30 | 3.1 | 0.50 | 0.020 |
| $PM_{10}$ | 0.01 | 0.1 | 0.02 | 0.001 |
| $PM_{2.5}$ | 0.01 | 0.1 | 0.02 | 0.001 |
| $SO_2$ | 0.04 | 0.4 | 0.10 | 0.003 |
| VOC | 0.20 | 1.8 | 0.30 | 0.010 |
| **Helicopter Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 1.30 | 2.3 | 0.40 | 0.020 |
| $NO_x$ | 2.20 | 3.4 | 0.50 | 0.030 |
| $PM_{10}$ | 0.10 | 0.1 | 0.02 | 0.001 |
| $PM_{2.5}$ | 0.10 | 0.1 | 0.02 | 0.001 |
| $SO_2$ | 0.30 | 0.4 | 0.10 | 0.004 |
| VOC | 1.00 | 1.9 | 0.30 | 0.020 |

**TABLE D-1**
**CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-B AND ROUTE VARIATIONS**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Traffic Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 2.90 | 5.8 | 0.80 | 0.050 |
| $NO_x$ | 5.70 | 11.5 | 1.60 | 0.090 |
| $PM_{10}$ | 0.40 | 0.8 | 0.10 | 0.010 |
| $PM_{2.5}$ | 0.30 | 0.6 | 0.10 | 0.010 |
| $SO_2$ | 0.04 | 0.1 | 0.01 | 0.001 |
| VOC | 0.90 | 1.6 | 0.30 | 0.010 |
| **Traffic Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 2.90 | 5.4 | 0.70 | 0.040 |
| $NO_x$ | 5.80 | 10.9 | 1.50 | 0.090 |
| $PM_{10}$ | 0.40 | 0.7 | 0.10 | 0.010 |
| $PM_{2.5}$ | 0.30 | 0.6 | 0.10 | 0.005 |
| $SO_2$ | 0.04 | 0.1 | 0.01 | 0.001 |
| VOC | 0.90 | 1.5 | 0.30 | 0.010 |

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
$NO_x$ = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
$PM_{10}$ = Particulate matter less than 10 micrometers
$SO_2$ = Sulfur dioxide
VOC = Volatile organic compounds

**TABLE D-2**
**CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-C AND ROUTE VARIATIONS**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Fugitive Dust from Earthmoving and Grading Activities** | | | | |
| $PM_{10}$ | 130.20 | 160.90 | 0.00 | 1.380 |
| $PM_{2.5}$ | 13.00 | 16.10 | 0.00 | 0.140 |
| **Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]** | | | | |
| $PM_{10}$ | 2,515.30 | 4,701.90 | 993.10 | 39.020 |
| $PM_{2.5}$ | 253.10 | 473.10 | 99.90 | 3.930 |
| **Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]** | | | | |
| $PM_{10}$ | 2,595.50 | 4,531.50 | 921.50 | 38.250 |
| $PM_{2.5}$ | 261.20 | 456.00 | 92.70 | 3.850 |
| **Nonroad Engine Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 27.60 | 56.30 | 6.70 | 0.430 |
| $NO_x$ | 24.90 | 51.00 | 6.10 | 0.390 |
| $PM_{10}$ | 1.70 | 3.30 | 0.40 | 0.030 |
| $PM_{2.5}$ | 1.70 | 3.30 | 0.40 | 0.030 |
| $SO_2$ | 0.10 | 0.30 | 0.03 | 0.002 |
| VOC | 1.90 | 3.90 | 0.50 | 0.030 |

**TABLE D-2**
**CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-C AND ROUTE VARIATIONS**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 26.40 | 45.10 | 5.30 | 0.370 |
| $NO_x$ | 23.80 | 40.00 | 4.60 | 0.320 |
| $PM_{10}$ | 1.60 | 2.70 | 0.30 | 0.020 |
| $PM_{2.5}$ | 1.60 | 2.70 | 0.30 | 0.020 |
| $SO_2$ | 0.10 | 0.20 | 0.02 | 0.002 |
| VOC | 1.80 | 3.10 | 0.30 | 0.020 |
| **Helicopter Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 0.20 | 2.20 | 0.40 | 0.010 |
| $NO_x$ | 0.30 | 3.20 | 0.50 | 0.020 |
| $PM_{10}$ | 0.01 | 0.10 | 0.02 | 0.001 |
| $PM_{2.5}$ | 0.01 | 0.10 | 0.02 | 0.001 |
| $SO_2$ | 0.04 | 0.40 | 0.10 | 0.003 |
| VOC | 0.20 | 1.80 | 0.30 | 0.010 |
| **Helicopter Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 1.30 | 2.40 | 0.40 | 0.020 |
| $NO_x$ | 2.20 | 3.50 | 0.50 | 0.030 |
| $PM_{10}$ | 0.10 | 0.10 | 0.02 | 0.001 |
| $PM_{2.5}$ | 0.10 | 0.10 | 0.02 | 0.001 |
| $SO_2$ | 0.30 | 0.50 | 0.10 | 0.004 |
| VOC | 1.00 | 2.00 | 0.30 | 0.020 |
| **Traffic Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 2.90 | 6.00 | 0.80 | 0.050 |
| $NO_x$ | 5.90 | 11.80 | 1.60 | 0.090 |
| $PM_{10}$ | 0.40 | 0.80 | 0.10 | 0.010 |
| $PM_{2.5}$ | 0.30 | 0.60 | 0.10 | 0.010 |
| $SO_2$ | 0.04 | 0.10 | 0.01 | 0.001 |
| VOC | 0.90 | 1.70 | 0.30 | 0.010 |
| **Traffic Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 3.00 | 5.60 | 0.80 | 0.040 |
| $NO_x$ | 5.90 | 11.20 | 1.50 | 0.090 |
| $PM_{10}$ | 0.40 | 0.70 | 0.10 | 0.010 |
| $PM_{2.5}$ | 0.30 | 0.60 | 0.10 | 0.005 |
| $SO_2$ | 0.04 | 0.06 | 0.01 | 0.001 |
| VOC | 0.90 | 1.60 | 0.30 | 0.010 |

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
$NO_x$ = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
$PM_{10}$ = Particulate matter less than 10 micrometers
$SO_2$ = Sulfur dioxide
VOC = Volatile organic compounds

| TABLE D-3<br>CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-D AND ROUTE VARIATIONS | | | | |
|---|---|---|---|---|
| **Pollutant** | **Year 1 (tons)** | **Year 2 (tons)** | **Year 3 (tons)** | **Tons Per Mile of Transmission Line** |
| **Fugitive Dust from Earthmoving and Grading Activities** | | | | |
| $PM_{10}$ | 153.60 | 189.8 | 0.0 | 1.370 |
| $PM_{2.5}$ | 15.40 | 19.0 | 0.0 | 0.140 |
| **Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]** | | | | |
| $PM_{10}$ | 2.988.70 | 5,586.9 | 1,180.1 | 39.020 |
| $PM_{2.5}$ | 300.70 | 562.2 | 118.7 | 3.930 |
| **Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]** | | | | |
| $PM_{10}$ | 3,084.10 | 5,384.4 | 1,094.9 | 38.250 |
| $PM_{2.5}$ | 310.30 | 541.8 | 110.2 | 3.850 |
| **Nonroad Engine Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 32.80 | 66.8 | 8.00 | 0.430 |
| $NO_x$ | 29.60 | 60.6 | 7.20 | 0.390 |
| $PM_{10}$ | 2.00 | 3.9 | 0.50 | 0.030 |
| $PM_{2.5}$ | 2.00 | 3.9 | 0.50 | 0.030 |
| $SO_2$ | 0.10 | 0.3 | 0.03 | 0.002 |
| VOC | 2.30 | 4.6 | 0.50 | 0.030 |
| **Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 31.40 | 53.6 | 6.30 | 0.370 |
| $NO_x$ | 28.20 | 47.5 | 5.50 | 0.320 |
| $PM_{10}$ | 1.90 | 3.2 | 0.40 | 0.020 |
| $PM_{2.5}$ | 1.90 | 3.2 | 0.40 | 0.020 |
| $SO_2$ | 0.10 | 0.3 | 0.03 | 0.002 |
| VOC | 2.20 | 3.6 | 0.40 | 0.020 |
| **Helicopter Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 0.30 | 2.7 | 0.40 | 0.010 |
| $NO_x$ | 0.40 | 3.8 | 0.60 | 0.020 |
| $PM_{10}$ | 0.01 | 0.1 | 0.02 | 0.001 |
| $PM_{2.5}$ | 0.01 | 0.1 | 0.02 | 0.001 |
| $SO_2$ | 0.10 | 0.5 | 0.10 | 0.003 |
| VOC | 0.20 | 2.2 | 0.40 | 0.010 |
| **Helicopter Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 1.50 | 2.9 | 0.40 | 0.020 |
| $NO_x$ | 2.60 | 4.2 | 0.60 | 0.030 |
| $PM_{10}$ | 0.10 | 0.1 | 0.02 | 0.001 |
| $PM_{2.5}$ | 0.10 | 0.1 | 0.02 | 0.001 |
| $SO_2$ | 0.30 | 0.5 | 0.10 | 0.004 |
| VOC | 1.20 | 2.3 | 0.40 | 0.020 |
| **Traffic Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 3.50 | 7.1 | 1.00 | 0.050 |
| $NO_x$ | 7.00 | 14.0 | 1.90 | 0.090 |
| $PM_{10}$ | 0.50 | 0.9 | 0.10 | 0.010 |
| $PM_{2.5}$ | 0.40 | 0.8 | 0.10 | 0.010 |
| $SO_2$ | 0.10 | 0.1 | 0.02 | 0.001 |
| VOC | 1.10 | 2.0 | 0.30 | 0.010 |

**TABLE D-3**
**CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-D AND ROUTE VARIATIONS**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Traffic Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 3.50 | 6.6 | 0.90 | 0.040 |
| $NO_x$ | 7.10 | 13.3 | 1.80 | 0.090 |
| $PM_{10}$ | 0.50 | 0.9 | 0.10 | 0.010 |
| $PM_{2.5}$ | 0.40 | 0.7 | 0.10 | 0.005 |
| $SO_2$ | 0.10 | 0.1 | 0.02 | 0.001 |
| VOC | 1.10 | 1.9 | 0.30 | 0.010 |

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
$NO_x$ = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
$PM_{10}$ = Particulate matter less than 10 micrometers
$SO_2$ = Sulfur dioxide
VOC = Volatile organic compounds

**TABLE D-4**
**CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-F AND ROUTE VARIATIONS**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Fugitive Dust from Earthmoving and Grading Activities** | | | | |
| $PM_{10}$ | 135.10 | 166.9 | 0.00 | 1.380 |
| $PM_{2.5}$ | 13.50 | 16.7 | 0.00 | 0.140 |
| **Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]** | | | | |
| $PM_{10}$ | 2,616.90 | 4,891.9 | 1,033.30 | 39.020 |
| $PM_{2.5}$ | 263.30 | 492.2 | 104.00 | 3.930 |
| **Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]** | | | | |
| $PM_{10}$ | 2,700.40 | 4,714.5 | 958.70 | 38.250 |
| $PM_{2.5}$ | 271.70 | 474.4 | 96.50 | 3.850 |
| **Nonroad Engine Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 28.70 | 58.5 | 7.00 | 0.430 |
| $NO_x$ | 25.90 | 53.1 | 6.30 | 0.390 |
| $PM_{10}$ | 1.70 | 3.4 | 0.40 | 0.030 |
| $PM_{2.5}$ | 1.70 | 3.4 | 0.40 | 0.030 |
| $SO_2$ | 0.10 | 0.3 | 0.03 | 0.002 |
| VOC | 2.00 | 4.0 | 0.50 | 0.030 |
| **Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 27.50 | 46.9 | 5.50 | 0.370 |
| $NO_x$ | 24.70 | 41.6 | 4.80 | 0.320 |
| $PM_{10}$ | 1.70 | 2.8 | 0.30 | 0.020 |
| $PM_{2.5}$ | 1.70 | 2.8 | 0.30 | 0.020 |
| $SO_2$ | 0.10 | 0.2 | 0.02 | 0.002 |
| VOC | 1.90 | 3.2 | 0.40 | 0.020 |

**TABLE D-4**
**CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE WYCO-F AND ROUTE VARIATIONS**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Helicopter Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 0.20 | 2.3 | 0.40 | 0.010 |
| $NO_x$ | 0.30 | 3.4 | 0.60 | 0.020 |
| $PM_{10}$ | 0.01 | 0.1 | 0.02 | 0.001 |
| $PM_{2.5}$ | 0.01 | 0.1 | 0.02 | 0.001 |
| $SO_2$ | 0.04 | 0.4 | 0.10 | 0.003 |
| VOC | 0.20 | 1.9 | 0.30 | 0.010 |
| **Helicopter Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 1.30 | 2.5 | 0.40 | 0.020 |
| $NO_x$ | 2.30 | 3.7 | 0.60 | 0.030 |
| $PM_{10}$ | 0.10 | 0.1 | 0.02 | 0.001 |
| $PM_{2.5}$ | 0.10 | 0.1 | 0.02 | 0.001 |
| $SO_2$ | 0.30 | 0.5 | 0.10 | 0.004 |
| VOC | 1.10 | 2.0 | 0.30 | 0.020 |
| **Traffic Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 3.10 | 6.2 | 0.90 | 0.050 |
| $NO_x$ | 6.10 | 12.3 | 1.70 | 0.090 |
| $PM_{10}$ | 0.40 | 0.8 | 0.10 | 0.010 |
| $PM_{2.5}$ | 0.30 | 0.7 | 0.10 | 0.010 |
| $SO_2$ | 0.05 | 0.1 | 0.01 | 0.001 |
| VOC | 1.00 | 1.7 | 0.30 | 0.010 |
| **Traffic Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 3.10 | 5.8 | 0.80 | 0.040 |
| $NO_x$ | 6.20 | 11.6 | 1.60 | 0.090 |
| $PM_{10}$ | 0.40 | 0.8 | 0.10 | 0.010 |
| $PM_{2.5}$ | 0.30 | 0.6 | 0.10 | 0.005 |
| $SO_2$ | 0.05 | 0.1 | 0.01 | 0.001 |
| VOC | 1.00 | 1.6 | 0.30 | 0.010 |

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
$NO_x$ = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
$PM_{10}$ = Particulate matter less than 10 micrometers
$SO_2$ = Sulfur dioxide
VOC = Volatile organic compounds

| TABLE D-5<br>CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT BAX-B | | | | |
|---|---|---|---|---|
| **Pollutant** | **Year 1 (tons)** | **Year 2 (tons)** | **Year 3 (tons)** | **Tons Per Mile of Transmission Line** |
| **Fugitive Dust from Earthmoving and Grading Activities** | | | | |
| $PM_{10}$ | 130.5 | 260.9 | 25.10 | 1.490 |
| $PM_{2.5}$ | 13.0 | 26.1 | 2.50 | 0.150 |
| **Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]** | | | | |
| $PM_{10}$ | 3,337.8 | 6,239.4 | 1,317.90 | 39.020 |
| $PM_{2.5}$ | 335.9 | 627.8 | 132.60 | 3.930 |
| **Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]** | | | | |
| $PM_{10}$ | 3,444.3 | 6,013.3 | 1,222.80 | 38.250 |
| $PM_{2.5}$ | 346.6 | 605.1 | 123.00 | 3.850 |
| **Nonroad Engine Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 68.7 | 149.5 | 20.20 | 0.850 |
| $NO_x$ | 29.4 | 83.4 | 18.30 | 0.470 |
| $PM_{10}$ | 2.7 | 6.6 | 1.20 | 0.040 |
| $PM_{2.5}$ | 2.7 | 6.6 | 1.20 | 0.040 |
| $SO_2$ | 0.1 | 0.4 | 0.10 | 0.002 |
| VOC | 5.4 | 11.3 | 1.40 | 0.060 |
| **Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 68.4 | 140.2 | 20.20 | 0.820 |
| $NO_x$ | 29.1 | 74.2 | 18.30 | 0.440 |
| $PM_{10}$ | 2.6 | 6.1 | 1.20 | 0.040 |
| $PM_{2.5}$ | 2.6 | 6.1 | 1.20 | 0.040 |
| $SO_2$ | 0.1 | 0.3 | 0.10 | 0.002 |
| VOC | 5.4 | 10.7 | 1.40 | 0.060 |
| **Helicopter Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 0.0 | 2.5 | 1.40 | 0.010 |
| $NO_x$ | 0.0 | 3.6 | 2.00 | 0.020 |
| $PM_{10}$ | 0.0 | 0.1 | 0.10 | 0.001 |
| $PM_{2.5}$ | 0.0 | 0.1 | 0.10 | 0.001 |
| $SO_2$ | 0.0 | 0.5 | 0.30 | 0.003 |
| VOC | 0.0 | 2.0 | 1.10 | 0.010 |
| **Helicopter Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 0.0 | 4.1 | 1.40 | 0.020 |
| $NO_x$ | 0.0 | 6.5 | 2.00 | 0.030 |
| $PM_{10}$ | 0.0 | 0.2 | 0.10 | 0.001 |
| $PM_{2.5}$ | 0.0 | 0.2 | 0.10 | 0.001 |
| $SO_2$ | 0.0 | 0.8 | 0.30 | 0.004 |
| VOC | 0.0 | 3.4 | 1.10 | 0.020 |
| **Traffic Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 2.9 | 9.2 | 2.50 | 0.050 |
| $NO_x$ | 6.1 | 18.7 | 4.90 | 0.110 |
| $PM_{10}$ | 0.4 | 1.3 | 0.30 | 0.010 |
| $PM_{2.5}$ | 0.3 | 1.0 | 0.30 | 0.010 |
| $SO_2$ | 0.1 | 0.1 | 0.04 | 0.001 |
| VOC | 1.1 | 2.8 | 0.80 | 0.02 |

**TABLE D-5**
**CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT BAX-B**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Traffic Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 2.9 | 8.9 | 2.30 | 0.050 |
| $NO_x$ | 6.1 | 18.3 | 4.60 | 0.100 |
| $PM_{10}$ | 0.4 | 1.2 | 0.30 | 0.010 |
| $PM_{2.5}$ | 0.3 | 1.0 | 0.30 | 0.010 |
| $SO_2$ | 0.1 | 0.1 | 0.04 | 0.001 |
| VOC | 1.1 | 2.7 | 0.70 | 0.020 |

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
$NO_x$ = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
$PM_{10}$ = Particulate matter less than 10 micrometers
$SO_2$ = Sulfur dioxide
VOC = Volatile organic compounds

**TABLE D-6**
**CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT BAX-C**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Fugitive Dust from Earthmoving and Grading Activities** | | | | |
| $PM_{10}$ | 133.1 | 266.2 | 25.60 | 1.470 |
| $PM_{2.5}$ | 13.3 | 26.6 | 2.60 | 0.150 |
| **Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]** | | | | |
| $PM_{10}$ | 3,463.3 | 6,474.1 | 1,367.50 | 39.020 |
| $PM_{2.5}$ | 348.5 | 651.5 | 137.60 | 3.930 |
| **Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]** | | | | |
| $PM_{10}$ | 3,573.8 | 6,239.4 | 1,268.80 | 38.250 |
| $PM_{2.5}$ | 359.6 | 627.8 | 127.70 | 3.850 |
| **Nonroad Engine Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 71.3 | 155.1 | 21.00 | 0.850 |
| $NO_x$ | 30.5 | 86.5 | 19.00 | 0.470 |
| $PM_{10}$ | 2.8 | 6.9 | 1.30 | 0.040 |
| $PM_{2.5}$ | 2.8 | 6.9 | 1.30 | 0.040 |
| $SO_2$ | 0.1 | 0.4 | 0.10 | 0.002 |
| VOC | 5.6 | 11.8 | 1.40 | 0.060 |
| **Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 70.9 | 145.4 | 21.00 | 0.820 |
| $NO_x$ | 30.2 | 77.0 | 19.00 | 0.440 |
| $PM_{10}$ | 2.7 | 6.3 | 1.30 | 0.040 |
| $PM_{2.5}$ | 2.7 | 6.3 | 1.30 | 0.040 |
| $SO_2$ | 0.1 | 0.4 | 0.10 | 0.002 |
| VOC | 5.6 | 11.1 | 1.40 | 0.060 |

**TABLE D-6**
**CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT BAX-C**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Helicopter Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 0.0 | 2.6 | 1.40 | 0.010 |
| $NO_x$ | 0.0 | 3.7 | 2.10 | 0.020 |
| $PM_{10}$ | 0.0 | 0.1 | 0.10 | 0.001 |
| $PM_{2.5}$ | 0.0 | 0.1 | 0.10 | 0.001 |
| $SO_2$ | 0.0 | 0.5 | 0.30 | 0.003 |
| VOC | 0.0 | 2.1 | 1.20 | 0.010 |
| **Helicopter Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 0.0 | 4.3 | 1.40 | 0.020 |
| $NO_x$ | 0.0 | 6.8 | 2.10 | 0.030 |
| $PM_{10}$ | 0.0 | 0.2 | 0.10 | 0.001 |
| $PM_{2.5}$ | 0.0 | 0.2 | 0.10 | 0.001 |
| $SO_2$ | 0.0 | 0.8 | 0.30 | 0.004 |
| VOC | 0.0 | 3.5 | 1.20 | 0.020 |
| **Traffic Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 3.0 | 9.5 | 2.60 | 0.050 |
| $NO_x$ | 6.4 | 19.4 | 5.00 | 0.110 |
| $PM_{10}$ | 0.4 | 1.3 | 0.30 | 0.010 |
| $PM_{2.5}$ | 0.4 | 1.1 | 0.30 | 0.010 |
| $SO_2$ | 0.1 | 0.1 | 0.04 | 0.001 |
| VOC | 1.1 | 2.9 | 0.80 | 0.020 |
| **Traffic Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 3.0 | 9.2 | 2.40 | 0.050 |
| $NO_x$ | 6.4 | 19.0 | 4.70 | 0.100 |
| $PM_{10}$ | 0.4 | 1.3 | 0.30 | 0.010 |
| $PM_{2.5}$ | 0.4 | 1.0 | 0.30 | 0.010 |
| $SO_2$ | 0.1 | 0.1 | 0.04 | 0.001 |
| VOC | 1.1 | 2.8 | 0.80 | 0.020 |

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
$NO_x$ = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
$PM_{10}$ = Particulate matter less than 10 micrometers
$SO_2$ = Sulfur dioxide
VOC = Volatile organic compounds

| TABLE D-7<br>CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT BAX-E | | | | |
|---|---|---|---|---|
| **Pollutant** | **Year 1 (tons)** | **Year 2 (tons)** | **Year 3 (tons)** | **Tons Per Mile of Transmission Line** |
| **Fugitive Dust from Earthmoving and Grading Activities** | | | | |
| $PM_{10}$ | 129.9 | 259.8 | 25.00 | 1.420 |
| $PM_{2.5}$ | 13.0 | 26.0 | 2.50 | 0.140 |
| **Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]** | | | | |
| $PM_{10}$ | 3,484.9 | 6,514.3 | 1,376.00 | 39.020 |
| $PM_{2.5}$ | 350.7 | 655.5 | 138.50 | 3.930 |
| **Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]** | | | | |
| $PM_{10}$ | 3,596.0 | 6.278.2 | 1,276.60 | 38.250 |
| $PM_{2.5}$ | 361.8 | 631.7 | 128.50 | 3.850 |
| **Nonroad Engine Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 71.7 | 156.1 | 21.10 | 0.850 |
| $NO_x$ | 30.7 | 87.1 | 19.10 | 0.470 |
| $PM_{10}$ | 2.8 | 6.9 | 1.30 | 0.040 |
| $PM_{2.5}$ | 2.8 | 6.9 | 1.30 | 0.040 |
| $SO_2$ | 0.1 | 0.4 | 0.10 | 0.002 |
| VOC | 5.6 | 11.8 | 1.40 | 0.060 |
| **Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 71.4 | 146.3 | 21.10 | 0.820 |
| $NO_x$ | 30.4 | 77.4 | 19.10 | 0.440 |
| $PM_{10}$ | 2.7 | 6.4 | 1.30 | 0.040 |
| $PM_{2.5}$ | 2.7 | 6.4 | 1.30 | 0.040 |
| $SO_2$ | 0.1 | 0.4 | 0.10 | 0.002 |
| VOC | 5.6 | 11.1 | 1.40 | 0.060 |
| **Helicopter Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 0.0 | 2.6 | 1.40 | 0.010 |
| $NO_x$ | 0.0 | 3.7 | 2.10 | 0.020 |
| $PM_{10}$ | 0.0 | 0.1 | 0.10 | 0.001 |
| $PM_{2.5}$ | 0.0 | 0.1 | 0.10 | 0.001 |
| $SO_2$ | 0.0 | 0.5 | 0.30 | 0.003 |
| VOC | 0.0 | 2.1 | 1.20 | 0.010 |
| **Helicopter Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 0.0 | 4.3 | 1.40 | 0.020 |
| $NO_x$ | 0.0 | 6.8 | 2.10 | 0.030 |
| $PM_{10}$ | 0.0 | 0.2 | 0.10 | 0.001 |
| $PM_{2.5}$ | 0.0 | 0.2 | 0.10 | 0.001 |
| $SO_2$ | 0.0 | 0.8 | 0.30 | 0.004 |
| VOC | 0.0 | 3.5 | 1.20 | 0.020 |
| **Traffic Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 3.0 | 9.6 | 2.60 | 0.050 |
| $NO_x$ | 6.4 | 19.5 | 5.10 | 0.110 |
| $PM_{10}$ | 0.5 | 1.3 | 0.40 | 0.010 |
| $PM_{2.5}$ | 0.4 | 1.1 | 0.30 | 0.010 |
| $SO_2$ | 0.1 | 0.1 | 0.04 | 0.001 |
| VOC | 1.1 | 2.9 | 0.80 | 0.020 |

**TABLE D-7**
**CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT BAX-E**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Traffic Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 3.0 | 9.3 | 2.40 | 0.050 |
| $NO_x$ | 6.4 | 19.1 | 4.80 | 0.100 |
| $PM_{10}$ | 0.5 | 1.3 | 0.30 | 0.010 |
| $PM_{2.5}$ | 0.4 | 1.1 | 0.30 | 0.010 |
| $SO_2$ | 0.1 | 0.1 | 0.04 | 0.001 |
| VOC | 1.1 | 2.9 | 0.80 | 0.020 |

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
$NO_x$ = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
$PM_{10}$ = Particulate matter less than 10 micrometers
$SO_2$ = Sulfur dioxide
VOC = Volatile organic compounds

**TABLE D-8**
**CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-A AND ROUTE VARIATION**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Fugitive Dust from Earthmoving and Grading Activities** | | | | |
| $PM_{10}$ | 102.40 | 204.8 | 19.70 | 1.590 |
| $PM_{2.5}$ | 10.20 | 20.5 | 2.00 | 0.160 |
| **Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]** | | | | |
| $PM_{10}$ | 2,462.70 | 4,603.6 | 972.40 | 39.020 |
| $PM_{2.5}$ | 247.80 | 463.2 | 97.80 | 3.930 |
| **Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]** | | | | |
| $PM_{10}$ | 2,541.30 | 4,436.7 | 902.20 | 38.250 |
| $PM_{2.5}$ | 255.70 | 446.4 | 90.80 | 3.850 |
| **Nonroad Engine Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 50.70 | 110.3 | 14.90 | 0.850 |
| $NO_x$ | 21.70 | 61.5 | 13.50 | 0.470 |
| $PM_{10}$ | 2.00 | 4.9 | 0.90 | 0.040 |
| $PM_{2.5}$ | 2.00 | 4.9 | 0.90 | 0.040 |
| $SO_2$ | 0.10 | 0.3 | 0.10 | 0.002 |
| VOC | 4.00 | 8.4 | 1.00 | 0.060 |
| **Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 50.40 | 103.4 | 14.90 | 0.820 |
| $NO_x$ | 21.50 | 54.7 | 13.50 | 0.440 |
| $PM_{10}$ | 1.90 | 4.5 | 0.90 | 0.040 |
| $PM_{2.5}$ | 1.90 | 4.5 | 0.90 | 0.040 |
| $SO_2$ | 0.10 | 0.3 | 0.10 | 0.002 |
| VOC | 4.00 | 7.9 | 1.00 | 0.060 |

**TABLE D-8**
**CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-A AND ROUTE VARIATION**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Helicopter Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 0.00 | 1.8 | 1.00 | 0.010 |
| $NO_x$ | 0.00 | 2.6 | 1.50 | 0.020 |
| $PM_{10}$ | 0.00 | 0.1 | 0.04 | 0.001 |
| $PM_{2.5}$ | 0.00 | 0.1 | 0.04 | 0.001 |
| $SO_2$ | 0.00 | 0.3 | 0.20 | 0.003 |
| VOC | 0.00 | 1.5 | 0.80 | 0.010 |
| **Helicopter Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 0.00 | 3.1 | 1.00 | 0.020 |
| $NO_x$ | 0.00 | 4.8 | 1.50 | 0.030 |
| $PM_{10}$ | 0.00 | 0.1 | 0.04 | 0.001 |
| $PM_{2.5}$ | 0.00 | 0.1 | 0.04 | 0.001 |
| $SO_2$ | 0.00 | 0.6 | 0.20 | 0.004 |
| VOC | 0.00 | 2.5 | 0.80 | 0.020 |
| **Traffic Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 2.10 | 6.8 | 1.80 | 0.050 |
| $NO_x$ | 4.50 | 13.8 | 3.60 | 0.110 |
| $PM_{10}$ | 0.30 | 0.9 | 0.20 | 0.010 |
| $PM_{2.5}$ | 0.30 | 0.8 | 0.20 | 0.010 |
| $SO_2$ | 0.04 | 0.1 | 0.03 | 0.001 |
| VOC | 0.80 | 2.1 | 0.60 | 0.020 |
| **Traffic Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 2.10 | 6.6 | 1.70 | 0.050 |
| $NO_x$ | 4.50 | 13.5 | 3.40 | 0.100 |
| $PM_{10}$ | 0.30 | 0.9 | 0.20 | 0.010 |
| $PM_{2.5}$ | 0.30 | 0.7 | 0.20 | 0.010 |
| $SO_2$ | 0.04 | 0.1 | 0.03 | 0.001 |
| VOC | 0.80 | 2.0 | 0.50 | 0.020 |

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
$NO_x$ = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
$PM_{10}$ = Particulate matter less than 10 micrometers
$SO_2$ = Sulfur dioxide
VOC = Volatile organic compounds

| TABLE D-9<br>CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-B AND ROUTE VARIATIONS | | | | |
|---|---|---|---|---|
| **Pollutant** | **Year 1 (tons)** | **Year 2 (tons)** | **Year 3 (tons)** | **Tons Per Mile of Transmission Line** |
| **Fugitive Dust from Earthmoving and Grading Activities** | | | | |
| $PM_{10}$ | 106.40 | 212.7 | 20.50 | 1.570 |
| $PM_{2.5}$ | 10.60 | 21.3 | 2.00 | 0.160 |
| **Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]** | | | | |
| $PM_{10}$ | 2,582.30 | 4,827.1 | 1,019.60 | 39.020 |
| $PM_{2.5}$ | 259.80 | 485.7 | 102.60 | 3.930 |
| **Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]** | | | | |
| $PM_{10}$ | 2,664.60 | 4,652.1 | 946.00 | 38.250 |
| $PM_{2.5}$ | 268.10 | 468.1 | 95.20 | 3.850 |
| **Nonroad Engine Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 53.20 | 115.6 | 15.70 | 0.850 |
| $NO_x$ | 22.80 | 64.5 | 14.20 | 0.470 |
| $PM_{10}$ | 2.10 | 5.1 | 0.90 | 0.040 |
| $PM_{2.5}$ | 2.10 | 5.1 | 0.90 | 0.040 |
| $SO_2$ | 0.10 | 0.3 | 0.10 | 0.002 |
| VOC | 4.20 | 8.8 | 1.10 | 0.060 |
| **Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 52.90 | 108.4 | 15.70 | 0.820 |
| $NO_x$ | 22.50 | 57.4 | 14.20 | 0.440 |
| $PM_{10}$ | 2.00 | 4.7 | 0.90 | 0.040 |
| $PM_{2.5}$ | 2.00 | 4.7 | 0.90 | 0.040 |
| $SO_2$ | 0.10 | 0.3 | 0.10 | 0.002 |
| VOC | 4.20 | 8.2 | 1.10 | 0.060 |
| **Helicopter Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 0.00 | 1.9 | 1.10 | 0.010 |
| $NO_x$ | 0.00 | 2.8 | 1.50 | 0.020 |
| $PM_{10}$ | 0.00 | 0.1 | 0.04 | 0.001 |
| $PM_{2.5}$ | 0.00 | 0.1 | 0.04 | 0.001 |
| $SO_2$ | 0.00 | 0.4 | 0.20 | 0.003 |
| VOC | 0.00 | 1.5 | 0.90 | 0.010 |
| **Helicopter Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 0.00 | 3.2 | 1.10 | 0.020 |
| $NO_x$ | 0.00 | 5.1 | 1.50 | 0.030 |
| $PM_{10}$ | 0.00 | 0.1 | 0.04 | 0.001 |
| $PM_{2.5}$ | 0.00 | 0.1 | 0.04 | 0.001 |
| $SO_2$ | 0.00 | 0.6 | 0.20 | 0.004 |
| VOC | 0.00 | 2.6 | 0.90 | 0.020 |
| **Traffic Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 2.20 | 7.1 | 1.90 | 0.050 |
| $NO_x$ | 4.70 | 14.5 | 3.80 | 0.110 |
| $PM_{10}$ | 0.30 | 1.0 | 0.30 | 0.010 |
| $PM_{2.5}$ | 0.30 | 0.8 | 0.20 | 0.010 |
| $SO_2$ | 0.05 | 0.1 | 0.03 | 0.001 |
| VOC | 0.80 | 2.2 | 0.60 | 0.020 |

**TABLE D-9**
**CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-B AND ROUTE VARIATIONS**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Traffic Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 2.20 | 6.9 | 1.80 | 0.050 |
| $NO_x$ | 4.70 | 14.1 | 3.50 | 0.100 |
| $PM_{10}$ | 0.30 | 1.0 | 0.20 | 0.010 |
| $PM_{2.5}$ | 0.30 | 0.8 | 0.20 | 0.010 |
| $SO_2$ | 0.05 | 0.1 | 0.03 | 0.001 |
| VOC | 0.80 | 2.1 | 0.60 | 0.020 |

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
$NO_x$ = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
$PM_{10}$ = Particulate matter less than 10 micrometers
$SO_2$ = Sulfur dioxide
VOC = Volatile organic compounds

**TABLE D-10**
**CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-C AND ROUTE VARIATIONS**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Fugitive Dust from Earthmoving and Grading Activities** | | | | |
| $PM_{10}$ | 108.30 | 216.7 | 20.80 | 1.650 |
| $PM_{2.5}$ | 10.80 | 21.7 | 2.10 | 0.160 |
| **Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]** | | | | |
| $PM_{10}$ | 2,508.10 | 4,688.5 | 990.30 | 39.020 |
| $PM_{2.5}$ | 252.40 | 471.8 | 99.70 | 3.930 |
| **Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]** | | | | |
| $PM_{10}$ | 2,588.10 | 4,518.6 | 918.80 | 38.250 |
| $PM_{2.5}$ | 260.40 | 454.7 | 92.50 | 3.850 |
| **Nonroad Engine Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 51.60 | 112.3 | 15.20 | 0.850 |
| $NO_x$ | 22.10 | 62.7 | 13.80 | 0.470 |
| $PM_{10}$ | 2.00 | 5.0 | 0.90 | 0.040 |
| $PM_{2.5}$ | 2.00 | 5.0 | 0.90 | 0.040 |
| $SO_2$ | 0.10 | 0.3 | 0.10 | 0.002 |
| VOC | 4.10 | 8.5 | 1.00 | 0.060 |
| **Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 51.40 | 105.3 | 15.20 | 0.820 |
| $NO_x$ | 21.90 | 55.7 | 13.80 | 0.440 |
| $PM_{10}$ | 2.00 | 4.6 | 0.90 | 0.040 |
| $PM_{2.5}$ | 2.00 | 4.6 | 0.90 | 0.040 |
| $SO_2$ | 0.10 | 0.3 | 0.10 | 0.002 |
| VOC | 4.00 | 8.0 | 1.00 | 0.060 |

**TABLE D-10**
**CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-C AND ROUTE VARIATIONS**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Helicopter Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 0.00 | 1.9 | 1.00 | 0.010 |
| $NO_x$ | 0.00 | 2.7 | 1.50 | 0.020 |
| $PM_{10}$ | 0.00 | 0.1 | 0.04 | 0.001 |
| $PM_{2.5}$ | 0.00 | 0.1 | 0.04 | 0.001 |
| $SO_2$ | 0.00 | 0.3 | 0.20 | 0.003 |
| VOC | 0.00 | 1.5 | 0.80 | 0.010 |
| **Helicopter Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 0.00 | 3.1 | 1.00 | 0.020 |
| $NO_x$ | 0.00 | 4.9 | 1.50 | 0.030 |
| $PM_{10}$ | 0.00 | 0.1 | 0.04 | 0.001 |
| $PM_{2.5}$ | 0.00 | 0.1 | 0.04 | 0.001 |
| $SO_2$ | 0.00 | 0.6 | 0.20 | 0.004 |
| VOC | 0.00 | 2.5 | 0.80 | 0.020 |
| **Traffic Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 2.20 | 6.9 | 1.90 | 0.050 |
| $NO_x$ | 4.60 | 14.1 | 3.70 | 0.110 |
| $PM_{10}$ | 0.30 | 1.0 | 0.30 | 0.010 |
| $PM_{2.5}$ | 0.30 | 0.8 | 0.20 | 0.010 |
| $SO_2$ | 0.04 | 0.1 | 0.03 | 0.001 |
| VOC | 0.80 | 2.1 | 0.60 | 0.020 |
| **Traffic Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 2.20 | 6.7 | 1.70 | 0.050 |
| $NO_x$ | 4.60 | 13.7 | 3.40 | 0.100 |
| $PM_{10}$ | 0.30 | 0.9 | 0.20 | 0.010 |
| $PM_{2.5}$ | 0.30 | 0.8 | 0.20 | 0.010 |
| $SO_2$ | 0.04 | 0.1 | 0.03 | 0.001 |
| VOC | 0.80 | 2.1 | 0.60 | 0.020 |

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
$NO_x$ = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
$PM_{10}$ = Particulate matter less than 10 micrometers
$SO_2$ = Sulfur dioxide
VOC = Volatile organic compounds

| TABLE D-11<br>CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-H | | | | |
|---|---|---|---|---|
| **Pollutant** | **Year 1 (tons)** | **Year 2 (tons)** | **Year 3 (tons)** | **Tons Per Mile of Transmission Line** |
| **Fugitive Dust from Earthmoving and Grading Activities** | | | | |
| $PM_{10}$ | 99.20 | 198.4 | 19.10 | 1.580 |
| $PM_{2.5}$ | 9.90 | 19.8 | 1.90 | 0.160 |
| **Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]** | | | | |
| $PM_{10}$ | 2,398.20 | 4,482.9 | 946.90 | 39.020 |
| $PM_{2.5}$ | 241.30 | 451.1 | 95.30 | 3.930 |
| **Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]** | | | | |
| $PM_{10}$ | 2,474.70 | 4,320.4 | 878.50 | 38.250 |
| $PM_{2.5}$ | 249.00 | 434.7 | 88.40 | 3.850 |
| **Nonroad Engine Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 49.40 | 107.4 | 14.50 | 0.850 |
| $NO_x$ | 21.10 | 59.9 | 13.20 | 0.470 |
| $PM_{10}$ | 1.90 | 4.8 | 0.90 | 0.040 |
| $PM_{2.5}$ | 1.90 | 4.8 | 0.90 | 0.040 |
| $SO_2$ | 0.10 | 0.3 | 0.10 | 0.002 |
| VOC | 3.90 | 8.1 | 1.00 | 0.060 |
| **Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 49.10 | 100.7 | 14.50 | 0.820 |
| $NO_x$ | 20.90 | 53.3 | 13.20 | 0.440 |
| $PM_{10}$ | 1.90 | 4.4 | 0.90 | 0.040 |
| $PM_{2.5}$ | 1.90 | 4.4 | 0.90 | 0.040 |
| $SO_2$ | 0.10 | 0.2 | 0.10 | 0.002 |
| VOC | 3.90 | 7.7 | 1.00 | 0.060 |
| **Helicopter Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 0.00 | 1.8 | 1.00 | 0.010 |
| $NO_x$ | 0.00 | 2.6 | 1.40 | 0.020 |
| $PM_{10}$ | 0.00 | 0.1 | 0.04 | 0.001 |
| $PM_{2.5}$ | 0.00 | 0.1 | 0.04 | 0.001 |
| $SO_2$ | 0.00 | 0.3 | 0.20 | 0.003 |
| VOC | 0.00 | 1.4 | 0.80 | 0.010 |
| **Helicopter Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 0.00 | 3.0 | 1.00 | 0.020 |
| $NO_x$ | 0.00 | 4.7 | 1.40 | 0.030 |
| $PM_{10}$ | 0.00 | 0.1 | 0.04 | 0.001 |
| $PM_{2.5}$ | 0.00 | 0.1 | 0.04 | 0.001 |
| $SO_2$ | 0.00 | 0.6 | 0.20 | 0.004 |
| VOC | 0.00 | 2.4 | 0.80 | 0.020 |
| **Traffic Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 2.10 | 6.6 | 1.80 | 0.050 |
| $NO_x$ | 4.40 | 13.4 | 3.50 | 0.110 |
| $PM_{10}$ | 0.30 | 0.9 | 0.20 | 0.010 |
| $PM_{2.5}$ | 0.20 | 0.7 | 0.20 | 0.010 |
| $SO_2$ | 0.04 | 0.1 | 0.03 | 0.001 |
| VOC | 0.80 | 2.0 | 0.60 | 0.020 |

**TABLE D-11**
**CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-H**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Traffic Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 2.10 | 6.4 | 1.70 | 0.050 |
| $NO_x$ | 4.40 | 13.1 | 3.30 | 0.100 |
| $PM_{10}$ | 0.30 | 0.9 | 0.20 | 0.010 |
| $PM_{2.5}$ | 0.20 | 0.7 | 0.20 | 0.010 |
| $SO_2$ | 0.04 | 0.1 | 0.03 | 0.001 |
| VOC | 0.80 | 2.0 | 0.50 | 0.020 |

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
$NO_x$ = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
$PM_{10}$ = Particulate matter less than 10 micrometers
$SO_2$ = Sulfur dioxide
VOC = Volatile organic compounds

**TABLE D-12**
**CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-I**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Fugitive Dust from Earthmoving and Grading Activities** | | | | |
| $PM_{10}$ | 117.8 | 235.6 | 22.70 | 1.570 |
| $PM_{2.5}$ | 11.8 | 23.6 | 2.30 | 0.160 |
| **Paved and Unpaved Road Dust – Conventional Steel Erection Option[1]** | | | | |
| $PM_{10}$ | 2,871.6 | 5,367.9 | 1,133.80 | 39.020 |
| $PM_{2.5}$ | 289.0 | 540.1 | 114.10 | 3.930 |
| **Paved and Unpaved Road Dust – Steel Erection Using Helicopters Option[1]** | | | | |
| $PM_{10}$ | 2,963.2 | 5,173.3 | 1,052.00 | 38.250 |
| $PM_{2.5}$ | 298.2 | 520.6 | 105.90 | 3.850 |
| **Nonroad Engine Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 59.1 | 128.6 | 17.40 | 0.850 |
| $NO_x$ | 25.3 | 71.7 | 15.80 | 0.470 |
| $PM_{10}$ | 2.3 | 5.7 | 1.00 | 0.040 |
| $PM_{2.5}$ | 2.3 | 5.7 | 1.00 | 0.040 |
| $SO_2$ | 0.1 | 0.3 | 0.10 | 0.002 |
| VOC | 4.6 | 9.8 | 1.20 | 0.060 |
| **Nonroad Engine Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 58.8 | 120.6 | 17.40 | 0.820 |
| $NO_x$ | 25.0 | 63.8 | 15.80 | 0.440 |
| $PM_{10}$ | 2.3 | 5.2 | 1.00 | 0.040 |
| $PM_{2.5}$ | 2.3 | 5.2 | 1.00 | 0.040 |
| $SO_2$ | 0.1 | 0.3 | 0.10 | 0.002 |
| VOC | 4.6 | 9.2 | 1.20 | 0.060 |

**TABLE D-12**
**CRITERIA POLLUTANT EMISSIONS FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-I**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Helicopter Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 0.0 | 2.6 | 1.20 | 0.010 |
| $NO_x$ | 0.0 | 3.7 | 1.70 | 0.020 |
| $PM_{10}$ | 0.0 | 0.1 | 0.05 | 0.001 |
| $PM_{2.5}$ | 0.0 | 0.1 | 0.05 | 0.001 |
| $SO_2$ | 0.0 | 0.5 | 0.20 | 0.003 |
| VOC | 0.0 | 2.1 | 1.00 | 0.010 |
| **Helicopter Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 0.0 | 3.6 | 1.20 | 0.020 |
| $NO_x$ | 0.0 | 5.6 | 1.70 | 0.030 |
| $PM_{10}$ | 0.0 | 0.2 | 0.05 | 0.001 |
| $PM_{2.5}$ | 0.0 | 0.2 | 0.05 | 0.001 |
| $SO_2$ | 0.0 | 0.7 | 0.20 | 0.004 |
| VOC | 0.0 | 2.9 | 1.00 | 0.020 |
| **Traffic Emissions – Conventional Steel Erection Option[1]** | | | | |
| CO | 2.5 | 7.9 | 2.10 | 0.050 |
| $NO_x$ | 5.3 | 16.1 | 4.20 | 0.110 |
| $PM_{10}$ | 0.4 | 1.1 | 0.30 | 0.010 |
| $PM_{2.5}$ | 0.3 | 0.9 | 0.20 | 0.010 |
| $SO_2$ | 0.1 | 0.1 | 0.03 | 0.001 |
| VOC | 0.9 | 2.4 | 0.70 | 0.020 |
| **Traffic Emissions – Steel Erection Using Helicopters Option[1]** | | | | |
| CO | 2.5 | 7.7 | 2.00 | 0.050 |
| $NO_x$ | 5.3 | 15.7 | 3.90 | 0.100 |
| $PM_{10}$ | 0.4 | 1.1 | 0.30 | 0.010 |
| $PM_{2.5}$ | 0.3 | 0.9 | 0.20 | 0.010 |
| $SO_2$ | 0.1 | 0.1 | 0.03 | 0.001 |
| VOC | 0.9 | 2.4 | 0.60 | 0.020 |

NOTES:
[1]Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.
CO = Carbon monoxide
$NO_x$ = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
$PM_{10}$ = Particulate matter less than 10 micrometers
$SO_2$ = Sulfur dioxide
VOC = Volatile organic compounds

**TABLE D-13**
**GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT)**
**FOR TRANSMISSION LINE CONSTRUCTION**
**FOR ALTERNATIVE WYCO-B AND ROUTE VARIATIONS**

| Area of Emissions | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Conventional Steel Erection Option** | | | | |
| Nonroad Engine | 4,695.6 | 9,728.8 | 1,151.4 | 76.17 |
| Helicopter | 131.2 | 1,279.6 | 213.3 | 7.94 |
| Traffic | 2,215.6 | 4,119.4 | 637.1 | 34.09 |
| **Steel Erection Using Helicopters Option** | | | | |
| Nonroad Engine | 4,480.1 | 7,622.1 | 872.3 | 63.45 |
| Helicopter | 816.3 | 1,390.1 | 213.3 | 11.83 |
| Traffic | 2,245.2 | 3,913.4 | 607.0 | 33.08 |

NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.

**TABLE D-14**
**GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT)**
**FOR TRANSMISSION LINE CONSTRUCTION**
**FOR ALTERNATIVE WYCO-C AND ROUTE VARIATIONS**

| Area of Emissions | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Conventional Steel Erection Option** | | | | |
| Nonroad Engine | 4,831.1 | 10,009.5 | 1,184.6 | 76.17 |
| Helicopter | 135.0 | 1,316.5 | 219.4 | 7.94 |
| Traffic | 2,279.5 | 4,238.2 | 655.5 | 34.09 |
| **Steel Erection Using Helicopters Option** | | | | |
| Nonroad Engine | 4,609.3 | 7,842.0 | 897.5 | 63.45 |
| Helicopter | 839.8 | 1,430.2 | 219.4 | 11.83 |
| Traffic | 2,310.0 | 4,026.3 | 624.5 | 33.08 |

NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.

**TABLE D-15**
**GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT)**
**FOR TRANSMISSION LINE CONSTRUCTION**
**FOR ALTERNATIVE WYCO-D AND ROUTE VARIATION**

| Area of Emissions | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Conventional Steel Erection Option** | | | | |
| Nonroad Engine | 5,740.4 | 11,893.4 | 1,407.5 | 76.17 |
| Helicopter | 160.4 | 1,564.3 | 260.7 | 7.94 |
| Traffic | 2,708.6 | 5,035.9 | 778.9 | 34.09 |
| **Steel Erection Using Helicopters Option** | | | | |
| Nonroad Engine | 5,476.9 | 9,317.9 | 1,066.4 | 63.45 |
| Helicopter | 997.9 | 1,699.3 | 260.7 | 11.83 |
| Traffic | 2,744.8 | 4,784.2 | 742.1 | 33.08 |

NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.

**TABLE D-16**
**GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT)**
**FOR TRANSMISSION LINE CONSTRUCTION**
**FOR ALTERNATIVE WYCO-F AND ROUTE VARIATIONS**

| Area of Emissions | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Conventional Steel Erection Option** | | | | |
| Nonroad Engine | 5,026.3 | 10,413.9 | 1,232.4 | 76.17 |
| Helicopter | 140.5 | 1,369.7 | 228.3 | 7.94 |
| Traffic | 2,371.6 | 4,409.4 | 682.0 | 34.09 |
| **Steel Erection Using Helicopters Option** | | | | |
| Nonroad Engine | 4,795.6 | 8,158.8 | 933.8 | 63.45 |
| Helicopter | 873.8 | 1,487.9 | 228.3 | 11.83 |
| Traffic | 2,403.3 | 4,189.0 | 649.8 | 33.08 |

NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.

**TABLE D-17**
**GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT)**
**FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT BAX-B**

| Area of Emissions | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Conventional Steel Erection Option** | | | | |
| Nonroad Engine | 5,691.4 | 16,759.3 | 3,572.8 | 93.21 |
| Helicopter | 0.0 | 1,451.5 | 808.9 | 8.10 |
| Traffic | 2,607.7 | 7,126.0 | 1,913.2 | 41.72 |
| **Steel Erection Using Helicopters Option** | | | | |
| Nonroad Engine | 5,627.4 | 14,562.0 | 2,666.7 | 81.86 |
| Helicopter | 0.0 | 2,558.8 | 808.9 | 12.06 |
| Traffic | 2,607.7 | 6,985.3 | 1,815.4 | 40.86 |

NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.

**TABLE D-18**
**GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT)**
**FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT BAX-C**

| Area of Emissions | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Conventional Steel Erection Option** | | | | |
| Nonroad Engine | 5,905.4 | 17,389.6 | 3,707.2 | 93.21 |
| Helicopter | 0.0 | 1,506.1 | 839.3 | 8.10 |
| Traffic | 2,705.8 | 7,394.0 | 1,985.2 | 41.72 |
| **Steel Erection Using Helicopters Option** | | | | |
| Nonroad Engine | 5,839.0 | 15,109.7 | 2,767.0 | 81.86 |
| Helicopter | 0.0 | 2,655.0 | 839.3 | 12.06 |
| Traffic | 2,705.8 | 7,248.0 | 1,883.7 | 40.86 |

NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.

**TABLE D-19**
**GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT)**
**FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT BAX-E**

| Area of Emissions | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Conventional Steel Erection Option** | | | | |
| Nonroad Engine | 5,942.1 | 17,497.7 | 3,730.2 | 93.21 |
| Helicopter | 0.0 | 1,515.5 | 844.5 | 8.10 |
| Traffic | 2,722.6 | 7,439.9 | 1,997.5 | 41.72 |
| **Steel Erection Using Helicopters Option** | | | | |
| Nonroad Engine | 5,875.3 | 15,203.5 | 2,784.2 | 81.86 |
| Helicopter | 0.0 | 2,671.5 | 844.5 | 12.06 |
| Traffic | 2,722.6 | 7,293.1 | 1,895.4 | 40.86 |

NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.

**TABLE D-20**
**GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT)**
**FOR TRANSMISSION LINE CONSTRUCTION**
**FOR ALTERNATIVE COUT-A AND ROUTE VARIATION**

| Area of Emissions | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons/Mile of Transmission Line |
|---|---|---|---|---|
| **Conventional Steel Erection Option** | | | | |
| Nonroad Engine | 4,199.2 | 12,365.4 | 2,636.1 | 93.21 |
| Helicopter | 0.0 | 1,071.0 | 596.8 | 8.10 |
| Traffic | 1,924.0 | 5,257.7 | 1,411.6 | 41.72 |
| **Steel Erection Using Helicopters Option** | | | | |
| Nonroad Engine | 4,152.0 | 10,744.2 | 1,967.5 | 81.86 |
| Helicopter | 0.0 | 1,887.9 | 596.8 | 12.06 |
| Traffic | 1,924.0 | 5,153.9 | 1,339.5 | 40.86 |

NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.

**TABLE D-21**
**GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT)**
**FOR TRANSMISSION LINE CONSTRUCTION**
**FOR ALTERNATIVE COUT-B AND ROUTE VARIATIONS**

| Area of Emissions | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Conventional Steel Erection Option** | | | | |
| Nonroad Engine | 4,403.1 | 12,965.7 | 2,764.1 | 93.21 |
| Helicopter | 0.0 | 1,123.0 | 625.8 | 8.10 |
| Traffic | 2,017.4 | 5,512.9 | 1,480.1 | 41.72 |
| **Steel Erection Using Helicopters Option** | | | | |
| Nonroad Engine | 4,353.6 | 11,265.7 | 2,063.0 | 81.86 |
| Helicopter | 0.0 | 1,979.6 | 625.8 | 12.06 |
| Traffic | 2,017.4 | 5,404.1 | 1,404.5 | 40.86 |

NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.

**TABLE D-22**
**GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT)**
**FOR TRANSMISSION LINE CONSTRUCTION**
**FOR ALTERNATIVE COUT-C AND ROUTE VARIATIONS**

| Area of Emissions | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Conventional Steel Erection Option** | | | | |
| Nonroad Engine | 4,276.7 | 12,593.5 | 2,684.7 | 93.21 |
| Helicopter | 0.0 | 1,090.7 | 607.8 | 8.10 |
| Traffic | 1,959.5 | 5,354.7 | 1,437.6 | 41.72 |
| **Steel Erection Using Helicopters Option** | | | | |
| Nonroad Engine | 4,228.6 | 10,942.4 | 2,003.8 | 81.86 |
| Helicopter | 0.0 | 1,922.8 | 607.8 | 12.06 |
| Traffic | 1,959.5 | 5,249.0 | 1,364.2 | 40.86 |

NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.

**TABLE D-23**
**GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT)**
**FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-H**

| Area of Emissions | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Conventional Steel Erection Option** | | | | |
| Nonroad Engine | 4,089.2 | 12,041.3 | 2,567.0 | 93.21 |
| Helicopter | 0.0 | 1,042.9 | 581.2 | 8.10 |
| Traffic | 1,873.6 | 5,119.9 | 1,374.6 | 41.72 |
| **Steel Erection Using Helicopters Option** | | | | |
| Nonroad Engine | 4,043.2 | 10,462.5 | 1,916.0 | 81.86 |
| Helicopter | 0.0 | 1,838.5 | 581.2 | 12.06 |
| Traffic | 1,873.6 | 5,018.8 | 1,304.3 | 40.86 |

NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.

**TABLE D-24**
**GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALENT)**
**FOR TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-I**

| Area of Emissions | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) | Tons Per Mile of Transmission Line |
|---|---|---|---|---|
| **Conventional Steel Erection Option** | | | | |
| Nonroad Engine | 4,896.4 | 14,418.3 | 3,073.7 | 93.21 |
| Helicopter | 0.0 | 1,518.1 | 695.9 | 8.10 |
| Traffic | 2,243.5 | 6,130.6 | 1,646.0 | 41.72 |
| **Steel Erection Using Helicopters Option** | | | | |
| Nonroad Engine | 4,841.3 | 12,527.9 | 2,294.2 | 81.86 |
| Helicopter | 0.0 | 2,201.4 | 695.9 | 12.06 |
| Traffic | 2,243.5 | 6,009.6 | 1,561.8 | 40.86 |

NOTE: Emissions would occur from construction activities including either steel erection using helicopters or conventional steel erection, not both. Emissions above include all activities, not just steel erection.

**TABLE D-25**
**CRITERIA POLLUTANT EMISSIONS FOR SERIES COMPENSATION STATIONS (EACH SERIES COMPENSATION STATION)**

| Pollutant | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) |
|---|---|---|---|
| **Fugitive Dust from Earthmoving and Grading Activities** | | | |
| $PM_{10}$ | 1.900 | 4.000 | 0.0000 |
| $PM_{2.5}$ | 0.200 | 0.400 | 0.0000 |
| **Paved and Unpaved Road Dust** | | | |
| $PM_{10}$ | 1.400 | 4.300 | 3.4000 |
| $PM_{2.5}$ | 0.100 | 0.400 | 0.4000 |
| **Nonroad Engine Emissions** | | | |
| CO | 5.600 | 9.900 | 6.6000 |
| $NO_x$ | 5.000 | 5.400 | 6.3000 |
| $PM_{10}$ | 0.300 | 0.40 | 0.4000 |
| $PM_{2.5}$ | 0.300 | 0.40 | 0.4000 |
| $SO_2$ | 0.010 | 0.010 | 0.0100 |
| VOC | 0.400 | 0.900 | 0.5000 |
| **Traffic Emissions** | | | |
| CO | 0.030 | 0.040 | 0.0300 |
| $NO_x$ | 0.070 | 0.090 | 0.0600 |
| $PM_{10}$ | 0.010 | 0.010 | 0.0040 |
| $PM_{2.5}$ | 0.004 | 0.010 | 0.0030 |
| $SO_2$ | 0.001 | 0.001 | 0.0004 |
| VOC | 0.010 | 0.020 | 0.0100 |

NOTES:
CO = Carbon monoxide
$NO_x$ = Nitrogen oxides
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
$PM_{10}$ = Particulate matter less than 10 micrometers
$SO_2$ = Sulfur dioxide
VOC = Volatile organic compounds

**TABLE D-26**
**GREENHOUSE GAS EMISSIONS (CARBON DIOXIDE EQUIVALNT) FOR SERIES COMPENSATION STATIONS (EACH SERIES COMPENSATION STATION)**

| Area of Emissions | Year 1 (tons) | Year 2 (tons) | Year 3 (tons) |
|---|---|---|---|
| Nonroad Engine | 948.8 | 887.7 | 1,179.0 |
| Traffic | 35.4 | 53.6 | 24.5 |

# D.2 Modeling Results Summary Tables – Transmission Line and Series Compensation Station Construction

**TABLE D-27**
**MODELING RESULTS – TRANSMISSION LINE CONSTRUCTION**
**FOR ALTERNATIVES WYCO-B, WYCO-C, WYCO-D, AND WYCO-F AND ROUTE VARIATIONS**

| Pollutant | Averaging Period | Maximum AERSCREEN Concentration ($\mu g/m^3$) | Background Concentration ($\mu g/m^3$) | Project Impact plus Background ($\mu g/m^3$) | Limiting Standard ($\mu g/m^3$) | Comments |
|---|---|---|---|---|---|---|
| $NO_2$ | 1-hour | 1,307.2 | 55.7 | 1,362.9 | 188.7 | May exceed the numerical value of the standards |
| $PM_{10}$ | 24-hour | 62.5 | 58.4 | 120.9 | 150.0 | Below all ambient air quality standards |
| $PM_{2.5}$ | 24-hour | 8.2 | 13.2 | 21.4 | 35.0 | Below all ambient air quality standards |
| CO | 1-hour | 5,758.0 | 1,379.3 | 7,137.3 | 40,000.0 | Below all ambient air quality standards |
| | 8-hour | 5,758.0 | 1,092.0 | 6,850.0 | 10,000.0 | Below all ambient air quality standards |
| $SO_2$ | 1-hour | 3.2 | 13.2 | 16.3 | 196.4 | Below all ambient air quality standards |
| | 3-hour | 3.2 | 10.3 | 13.4 | 700.0 | Below all ambient air quality standards |

NOTES:
A factor of 80 percent was applied to estimated nitrogen oxides concentrations for conversion to nitrogen dioxide based on the Environmental Protection Agency's March 1, 2011, memorandum: *Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-Hour $NO_2$ National Ambient Air Quality Standard*
CO = Carbon monoxide
$NO_2$ = Nitrogen dioxide
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
$PM_{10}$ = Particulate matter less than 10 micrometers
$SO_2$ = Sulfur dioxide

**TABLE D-28**
**MODELING RESULTS – TRANSMISSION LINE CONSTRUCTION**
**FOR ALTERNATIVES COUT BAX-B, COUT BAX-C, AND COUT BAX-E**

| Pollutant | Averaging Period | Maximum AERSCREEN Concentration ($\mu g/m^3$) | Background Concentration ($\mu g/m^3$) | Project Impact plus Background ($\mu g/m^3$) | Limiting Standard ($\mu g/m^3$) | Comments |
|---|---|---|---|---|---|---|
| $NO_2$ | 1-hour | 1,307.2 | 73.7 | 1,380.9 | 188.7 | May exceed the numerical value of the standards |
| $PM_{10}$ | 24-hour | 62.5 | 78.8 | 141.4 | 150.0 | Below all ambient air quality standards |
| $PM_{2.5}$ | 24-hour | 8.2 | 19.9 | 28.1 | 35.0 | Below all ambient air quality standards |
| CO | 1-hour | 5,758.0 | 1,954.0 | 7,712.0 | 40,000.0 | Below all ambient air quality standards |
| | 8-hour | 5,758.0 | 1,264.4 | 7,022.4 | 10,000.0 | Below all ambient air quality standards |

**TABLE D-28**
**MODELING RESULTS – TRANSMISSION LINE CONSTRUCTION**
**FOR ALTERNATIVES COUT BAX-B, COUT BAX-C, AND COUT BAX-E**

| Pollutant | Averaging Period | Maximum AERSCREEN Concentration ($\mu g/m^3$) | Background Concentration ($\mu g/m^3$) | Project Impact plus Background ($\mu g/m^3$) | Limiting Standard ($\mu g/m^3$) | Comments |
|---|---|---|---|---|---|---|
| $SO_2$ | 1-hour | 3.2 | 7.9 | 11.1 | 196.4 | Below all ambient air quality standards |
| | 3-hour | 3.2 | 7.9 | 11.1 | 700.0 | Below all ambient air quality standards |

NOTES:
A factor of 80 percent was applied to estimated nitrogen oxides concentrations for conversion to nitrogen dioxide based on the Environmental Protection Agency's March 1, 2011, memorandum: *Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-Hour $NO_2$ National Ambient Air Quality Standard*
CO = Carbon monoxide
$NO_2$ = Nitrogen dioxide
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
$PM_{10}$ = Particulate matter less than 10 micrometers
$SO_2$ = Sulfur dioxide

**TABLE D-29**
**MODELING RESULTS – TRANSMISSION LINE CONSTRUCTION**
**FOR ALTERNATIVE COUT-A AND ROUTE VARIATION AND ALTERNATIVE COUT-B AND ROUTE VARIATIONS (EXCEPT UTAH COUNTY $PM_{10}$)**

| Pollutant | Averaging Period | Maximum AERSCREEN Concentration ($\mu g/m^3$) | Background Concentration ($\mu g/m^3$) | Project Impact plus Background ($\mu g/m^3$) | Limiting Standard ($\mu g/m^3$) | Comments |
|---|---|---|---|---|---|---|
| $NO_2$ | 1-hour | 1,307.2 | 93.0 | 1,400.2 | 188.7 | May exceed the numerical value of the standards |
| $PM_{10}$ | 24-hour | 62.5 | 78.8 | 141.4 | 150.0 | Below all ambient air quality standards |
| $PM_{2.5}$ | 24-hour | 8.2 | 19.8 | 28.0 | 35.0 | Below all ambient air quality standards |
| CO | 1-hour | 5,758.0 | 4,367.8 | 10,125.8 | 40,000.0 | Below all ambient air quality standards |
| | 8-hour | 5,758.0 | 1,724.1 | 7,482.1 | 10,000.0 | Below all ambient air quality standards |
| $SO_2$ | 1-hour | 3.2 | 7.9 | 11.1 | 196.4 | Below all ambient air quality standards |
| | 3-hour | 3.2 | 7.9 | 11.1 | 700.0 | Below all ambient air quality standards |

NOTES:
A factor of 80 percent was applied to estimated nitrogen oxides concentrations for conversion to nitrogen dioxide based on the Environmental Protection Agency's March 1, 2011, memorandum: *Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-Hour $NO_2$ National Ambient Air Quality Standard*
CO = Carbon monoxide
$NO_2$ = Nitrogen dioxide
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
$PM_{10}$ = Particulate matter less than 10 micrometers
$SO_2$ = Sulfur dioxide

**TABLE D-30**
**MODELING RESULTS – TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-A AND ROUTE VARIATION (UTAH COUNTY), ALTERNATIVE COUT-B AND ROUTE VARIATIONS (UTAH COUNTY), AND ALTERNATIVE COUT-C AND ROUTE VARIATIONS (UTAH COUNTY)**

| Pollutant | Averaging Period | Maximum AERSCREEN Concentration ($\mu g/m^3$) | Background Concentration ($\mu g/m^3$) | Project Impact plus Background ($\mu g/m^3$) | Limiting Standard ($\mu g/m^3$) | Comments |
|---|---|---|---|---|---|---|
| $PM_{10}$ | 24-hour | 62.5 | 49.5 | 112.0 | 150.0 | Below all ambient air quality standards |

NOTE: $PM_{10}$ = Particulate matter less than 10 micrometers

**TABLE D-31**
**MODELING RESULTS – TRANSMISSION LINE CONSTRUCTION FOR ALTERNATIVE COUT-C AND ROUTE VARIATIONS AND ALTERNATIVES COUT-H AND COUT-I (EXCEPT UTAH COUNTY $PM_{10}$)**

| Pollutant | Averaging Period | Maximum AERSCREEN Concentration ($\mu g/m^3$) | Background Concentration ($\mu g/m^3$) | Project Impact plus Background ($\mu g/m^3$) | Limiting Standard ($\mu g/m^3$) | Comments |
|---|---|---|---|---|---|---|
| $NO_2$ | 1-hour | 1,307.2 | 67.0 | 1,374.2 | 188.7 | May exceed the numerical value of the standards |
| $PM_{10}$ | 24-hour | 62.5 | 78.8 | 141.4 | 150.0 | Below all ambient air quality standards |
| $PM_{2.5}$ | 24-hour | 8.2 | 14.5 | 22.7 | 35.0 | Below all ambient air quality standards |
| CO | 1-hour | 5,758.0 | 4,367.8 | 10,125.8 | 40,000.0 | Below all ambient air quality standards |
| | 8-hour | 5,758.0 | 1,724.1 | 7,482.1 | 10,000.0 | Below all ambient air quality standards |
| $SO_2$ | 1-hour | 3.2 | 7.9 | 11.1 | 196.4 | Below all ambient air quality standards |
| | 3-hour | 3.2 | 7.9 | 11.1 | 700.0 | Below all ambient air quality standards |

NOTES:
A factor of 80 percent was applied to estimated nitrogen oxides concentrations for conversion to nitrogen dioxide based on the Environmental Protection Agency's March 1, 2011 memorandum: *Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-Hour $NO_2$ National Ambient Air Quality Standard*
CO = Carbon monoxide
$NO_2$ = Nitrogen dioxide
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
$PM_{10}$ = Particulate matter less than 10 micrometers
$SO_2$ = Sulfur dioxide

**TABLE D-32**
**MODELING RESULTS – SERIES COMPENSATION STATION CONSTRUCTION**
**EACH SERIES COMPENSATION STATION**

| Pollutant | Averaging Period | Maximum AERSCREEN Concentration (µg/m$^3$) | Background Concentration (µg/m$^3$) | Project Impact plus Background (µg/m$^3$) | Limiting Standard (µg/m$^3$) | Comments |
|---|---|---|---|---|---|---|
| $NO_2$ | 1-hour | 4,950.4 | 67.0 | 5,017.4 | 188.7 | May exceed the numerical value of the standards |
| $PM_{10}$ | 24-hour | 20.5 | 78.8 | 99.3 | 150.0 | Below all ambient air quality standards |
| $PM_{2.5}$ | 24-hour | 7.1 | 14.5 | 21.6 | 35.0 | Below all ambient air quality standards |
| CO | 1-hour | 4,524.0 | 4,367.8 | 8,891.8 | 40,000.0 | Below all ambient air quality standards |
| | 8-hour | 4,524.0 | 1,724.1 | 6,248.1 | 10,000.0 | Below all ambient air quality standards |
| $SO_2$ | 1-hour | 11.4 | 7.9 | 19.3 | 196.4 | Below all ambient air quality standards |
| | 3-hour | 11.4 | 7.9 | 19.3 | 700.0 (Colorado)<br>1,300 (Utah) | Below all ambient air quality standards |

NOTES:
A factor of 80 percent was applied to estimated nitrogen oxides concentrations for conversion to nitrogen dioxide based on the Environmental Protection Agency's March 1, 2011, memorandum: *Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-Hour $NO_2$ National Ambient Air Quality Standard*
CO = Carbon monoxide
$NO_2$ = Nitrogen dioxide
$PM_{2.5}$ = Particulate matter less than 2.5 micrometers
$PM_{10}$ = Particulate matter less than 10 micrometers
$SO_2$ = Sulfur dioxide

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